

fon



**La Fontenna
User Manual**

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Developed by

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Department of Marketing

**If you have any comments about this manual,
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Document file

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1.

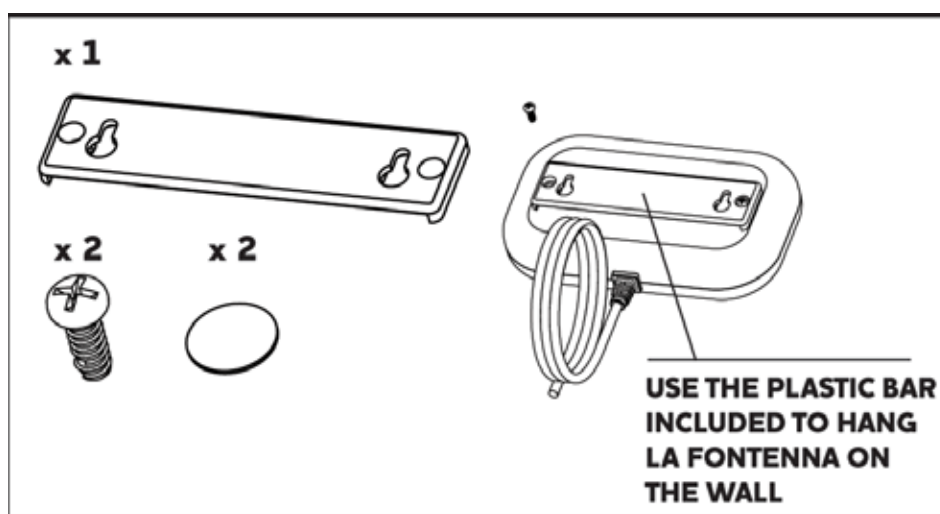


Package Contents

1. Package Contents

In the La Fontenna package you should find the following items included:

- 1 La Fontenna
- 1 Wall mounting kit (two screws + one plastic hanger)
- 1 Interior mounting kit (two adhesive stickers)
- 1 Quick Installation Guide



Please immediately inform us in the event of any missing or damaged parts. Visit www.fon.com and choose Help to report any problem or to visit our support site.

2.



**Hardware
Description**

2. Hardware Description

The La Fontenna has two sides and a cable that you must plug into the connector of the La Fonera. Don't forget to first remove its white antenna or you will face some problems trying to get the two connectors in at the same time.

2.1. Front Side

This side is where the antenna goes in. Place the front of the antenna towards the area you want to give wifi coverage to. Please, see the La Fontenna Mounting Options section for proper installation.



2.2. Back Side

The back side of the La Fontenna will be useful for its installation. You can use the adhesive stickers or the plastic hanger to attach it on a window or on a wall.



- NOTE: As this is a directional antenna, you should not place it on top of your La Fonera unless you want to cover the upper floor of your house or your neighbour's house above you. You can find more information regarding this matter in the "What's a Directional Antenna?" section.

3.



Hardware Installation

3. Hardware Installation

1. Find your La Fonera

2. Remove the antenna

To remove the antenna, hold it by its base and unscrew firmly by turning it counter-clockwise until the antenna is separated from the connector.

3. Connect the La Fontenna

Take your La Fontenna connector and screw it (clockwise) into your La Fonera.

4. Installation is complete.

Now place your La Fontenna in a strategic location.

4.



La Fontenna Mounting Options

4. La Fontenna Mounting Options

The La Fontenna is a panel antenna designed to be used with the La Fonera. It has an SMA connector which is the same as the one in your device. In the package you will find mounting kits for internal or external use. We recommend you place the embossed side (the one with the FON logo) facing the area you want to cover. That way your signal will be more powerful.

- NOTE: As a general rule, if you are going to mount the La Fontenna using the adhesive stickers, we recommend you cut both stickers with scissors. This way you can fix the stickers on four different sides, that will ensure that the la Fontenna will be sturdy.

4.1. On a Window

This side is where the antenna goes in. You must face it against the area you want to cover. Please, watch the La Fontenna Mounting Options section in order to see how to install it properly.

4.1.1. Indoor

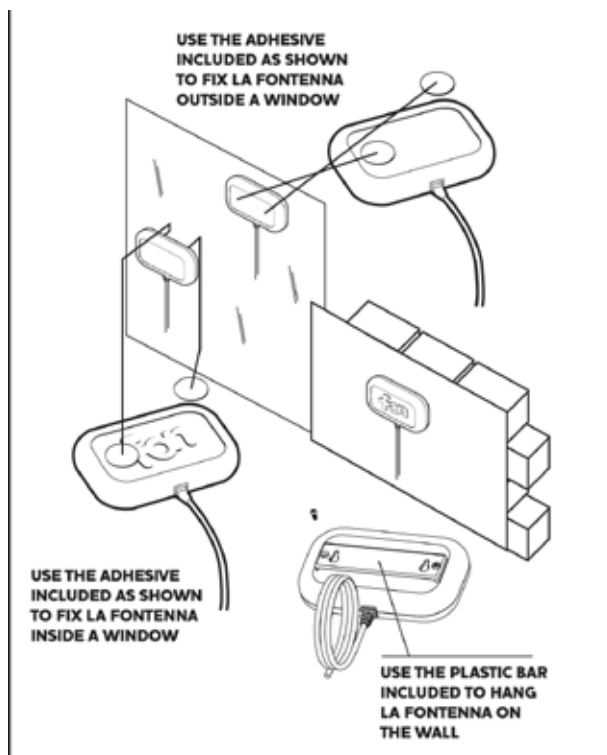
Place the four stickers (see previous note) as shown.

4.1.2. Outdoor

Place the four stickers (see previous note) as shown.

4.2. On a Wall

Screw the plastic hanger to the back of the La Fontenna and fix it to the wall facing the street.



5.



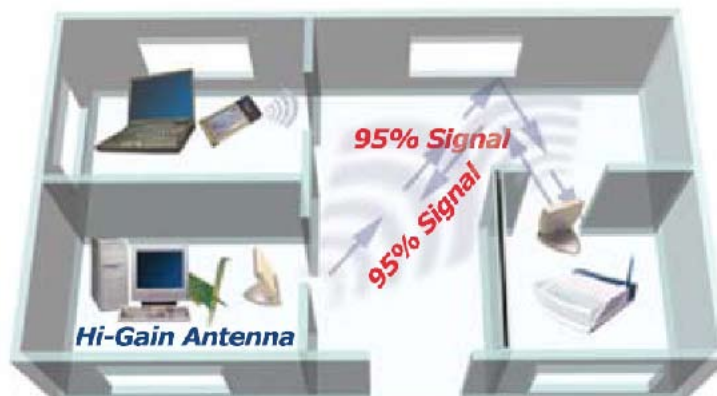
How Antennas Work

5. How Antennas Work

Suppose you have a room with the La Fonera and that the device you want to connect is in another room separated by a wall.



Your apartment walls may weaken the strength of your wifi signal and you may not have a good wifi coverage. To solve this problem the La Fontenna is set up to direct wireless signals out the door towards the room with the La Fonera. Radio frequencies lose significant signal strength when travelling through concrete and especially metal walls. To solve this it may be easier to bounce an amplified signal towards the opening in the room with the La Fonera.



The same happens in spare space. This way, you'll gain more coverage if you direct your La Fontenna to a nearby garden or to the buildings outside.

6.



What is a Directional Antenna

6. What is a Directional Antenna?

Your La Fonera comes with an **omni-directional antenna**. This is an antenna system that radiates power uniformly in one plane with a directive pattern in a perpendicular plane. Sounds complicated? Think of it as a candle with a small flame giving off light in all directions. The La Fontenna is a **directional antenna**. A directional antenna radiates greater power in one or more directions allowing increased performance on transmission and reception and reducing interference from unwanted sources. As a directional antenna, your La Fontenna works more like a torch/flashlight that gives off a lot of light primarily in one direction. Therefore, it is important that you direct it towards the area you want to provide the most coverage.

All practical antennas are at least somewhat directional, although usually only the direction of the plane parallel to the earth is considered. Practical antennas can easily be omni-directional in one plane.

7.



**Streamline your
performance**

7. Streamline your Performance

Your new La Fontenna is ideal for areas that receive poor coverage, as you can amplify the signal from the receiving end, i.e. your laptop.

The embossed side with the FON logo is the Hi-Gain side, which may send out a signal quickly. However, the other end (without the logo), may not have the strength to send back the signal instantaneously (and with the same strength).

- NOTE: Many factors around you may affect your wifi signal's range.

Your wireless connection will be stronger the closer your computer is to your router. In the same way, your wireless connection and performance will decrease somewhat as the distance between your router and the connected devices increases. This may or may not be noticeable to you. As you move farther from your router, connection speed may decrease. Factors that can weaken signals simply by getting in the way of your network's radio waves include metal appliances or obstructions, and walls.

If you have concerns about your network's performance that might be related to range or obstruction factors, try moving the computer to a position between five and 10 feet away from the router to see if distance is the problem.

- NOTE: While some of the items listed below can affect network performance, they will not keep your wireless network from functioning. If you are concerned that your network is not operating at its maximum effectiveness, this checklist may help.

1. Wireless Router Placement

Place your router, the central connection point of your network, as close as possible to the center of your wireless network devices or to the area you want to cover.

- Ensure that your router's networking antennas are parallel to each other and are positioned vertically (toward the ceiling). If your router itself is positioned vertically, point the antennas as much as possible in an upward direction.

7. Streamline your Performance

- In multistory areas, place the router on a floor that is as close to the center of the area as possible. This may mean placing the router on an upper floor.
- Try not to place the router near a cordless phone.

2. Avoid Obstacles and Interference

Avoid placing your router near devices that may emit radio “noise,” such as microwave ovens. Dense objects that can inhibit wireless communication include:

- Refrigerators
- Washers and/or dryers
- Metal cabinets
- Large aquariums
- Metallic-based, UV-tinted windows

If your wireless signal seems weak in some spots, make sure that objects such as the above are not blocking the signal’s path (between your computers and router).

3. Cordless Phones

If the performance of your wireless network is impaired after reviewing to the above, and you have a cordless phone:

- Try moving cordless phones away from the router and your wireless-enabled computers.
- Unplug and remove the battery from any cordless phone that operates on the 2.4GHz band (check the manufacturer’s information). If this fixes the problem, your phone may be interfering.
- If your phone supports channel selection, change the channel on the phone to the furthest channel from your wireless network. For example, change the phone to channel 1 and move your router to channel 11. See your phone’s user manual for detailed instructions.
- If necessary, consider switching to a 900MHz cordless phone.

7. Streamline your Performance

4. Choose the “Quietest” Channel for your Wireless Network

In locations where homes or offices are close together, such as apartment buildings or office complexes, there may be wireless networks nearby that can conflict with yours.

Use the Site Survey capabilities found in the wireless utility of your wireless adapter or card to locate any other wireless networks that are available (see your wireless adapter or card’s user manual), and move your router and computers to a channel as far away from other networks as possible.

- Experiment with more than one of the available channels in order to find the clearest connection and avoid interference from neighboring cordless phones or other wireless devices.

These guidelines should allow you to cover the maximum possible area with your router.



Antenna Terminology

8. Antenna Terminology

dBi (Decibel Isotropic) is a measurement unit of gain for an antenna strength. It is compared to a mathematically ideal which uniformly distributes energy in all directions. The standard factory antenna strength for the La Fonera is 2 dBi. A higher dBi level, like the 7dBi of the La Fontenna, means a more powerful wireless signal.

Reverse SMA Plug: Standard connector for the antenna of the La Fonera which comes with a detachable antenna, and the La Fontenna. The plug is on the end of the antenna connector that screws/fastens into the wireless device.

Reverse SMA Jack. The connector on the La Fonera side that screws into the Reverse SMA Plug.

9.

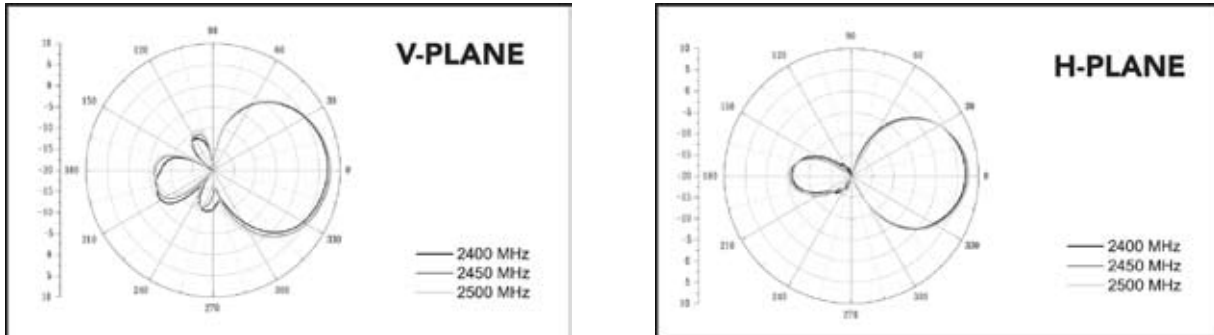


Antenna Specifications

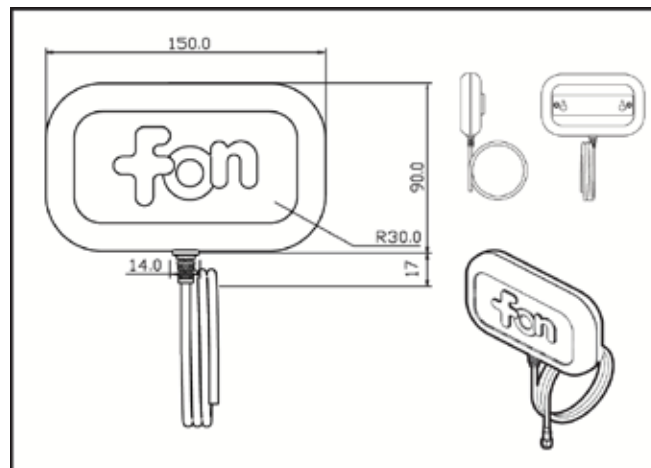
9. Antenna Specifications

9.1. Range

These coverage diagrams show the direction and area of the amplified wireless signal. Base your setup location on these specifications



9.2. Dimensions



9.3. Other Specifications

Frequency Range:	2400 MHz – 2500 MHz
Antenna gain-without cable:	7 dBi
Antenna gain-with cable:	6.5 dBi
VSWR 2.0 :	1 Max.
Polarization:	Linear, vertical
Impedance:	50
Temperature:	-10°C to +55°C
Connector:	R/P SMA PLUG
Cable:	ULA168,L = 3M

Warranty Statement

FON Wireless Limited warrants this product to be free from defects in material and workmanship under normal use for a period of two years from the Date of Purchase. This limited warranty extends only to the original purchaser. If the FON product malfunctions or fails to meet its published specifications covered by this warranty during the warranty period, FON Wireless Limited will repair or replace the product at no charge, provided the product has not been subject to misuse, abuse or non-FON Wireless Limited authorised alterations, modifications or repairs, abnormal physical or electrical stress, misuse, negligence, or accident and has been installed, operated, repaired, or maintained in accordance with instructions supplied by FON. Shipment of a returned product to FON Wireless Limited is the responsibility of the purchaser. All expressed and implied warranties for the FON product line and the warranties of merchantability and fitness for a particular purpose, are limited in duration to the above period.

Under no circumstances shall FON Wireless Limited be liable in any way to the user for damages including any lost profits, lost savings or other indirect, incidental, special, or consequential damages arising out of the use of, or inability to use, the FON products.

FON Wireless Limited shall have no responsibility for any data loss and shall have no liability arising out of any damage to or loss of such data while the product is in the user's possession.

FON Wireless Limited reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.

In no event shall FON Wireless Limited liability exceed the price paid for the product from direct, indirect, special, incidental or consequential damages resulting from the use of the product, its accompanying software, or its documentation. FON Wireless Limited does not offer refunds for any product.

- Disclaimer: Distance thresholds can be drastically reduced by environmental interferences.

Safety Notices

First read all of the instructions listed here and/or in the user manual before you operate this equipment. Pay particular attention to all safety precautions.

Retain the instructions for future reference.

All instructions, warning and caution statements (listed here and/or in the user manual) that accompany this equipment and of the router manufacturer must be strictly followed at all times to ensure the safe use of the equipment. Observe all warning and caution symbols that are affixed to this equipment.

This electrical equipment is designed with the utmost care for the safety of those who install and use it. However, when using this device, basic safety precautions should be followed at all times to reduce the risk of fire and injury to persons and the dangers of electric shock and static electricity, including the following:

This device was qualified under test conditions. To be in compliance with regulations:

The user must use the appliances supplied with the unit and install them properly.

Comply with the connection values and ratings when connecting the product to other devices.

Place unit to allow for easy access when connecting it to other devices. Operate this product only with the types of devices indicated in the product's manual. If you are not sure of the types of devices, consult with your dealer.

Do not use this product near water, for example, in a wet basement or near a swimming pool or bath tub.

Keep the product away from excessive heat and humidity and keep the product free from vibration and dust.

Wipe the unit with a clean, dry cloth. Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the unit or use forced air to remove dust.

Do not cover the product, or block the airflow to the product with any other objects.

Avoid installing or using this product during an electrical storm. There may be a remote risk of electric shock from lightning. During a lightning storm for added protection, unplug the product from any other device, unplug those from the electrical outlet and disconnect the devices. This will prevent damages due to lightning and power surges. Also do not leave the product unattended for long periods of time.

For safety reasons, we recommend that the product only be opened or handled by authorized service technicians. Authorized service technicians should allow for sufficient cooling off time prior to opening the device's casing as some of its components may reach high temperatures that may cause severe burns upon in contact with skin.

Be careful as this product may affect the proper functioning of medical equipment.

Wireless LAN and your Health

This product like other radio devices, emits radio frequency electromagnetic energy, but operates within the guidelines found in radio frequency safety standards and recommendations.

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